Ozone Modeling

What is air dispersion modeling?

- An air dispersion model is a set of mathematical equations that relates the release of air pollutants from emission sources to the corresponding concentration of pollutants in the ambient air.

How is ozone modeling different from air dispersion modeling for permits?

- For ozone modeling, sources emitting oxides of nitrogen (NOx) and volatile organic compounds (VOCs) are the main sources of interest. Sources that emit these pollutants include industry, automobiles, "area" sources such as dry cleaners and gas stations, off road sources such as construction equipment and locomotives, and natural sources of VOCs such as trees. Permitting modeling is concerned only with industrial emissions.
- Ozone modeling uses actual emissions in the model to calibrate the model to actual monitor values. Permit modeling uses "worst case" emission rates to insure these scenarios will meet the standards.

Why must the state perform ozone modeling?

- The US EPA has recently changed the National Ambient Air Quality Standards (NAAQS) for Ozone. It is unlikely that South Carolina, along with most of the nation, will be able to show attainment with the new standard.
- The state must develop control strategies that will allow South Carolina to comply with the new ozone standard. Using ozone modeling, the state can test which strategies show the greatest potential of allowing the state to attain the new ozone standard.

This fact sheet is intended as a summary of ozone modeling issues and is not all-inclusive. To obtain additional information regarding ozone modeling, you may contact the BAQ at (803) 898-4123, browse our Internet site at http://www.scdhec.gov/baq/, or write to the following address:

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